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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,197	10/29/2003	Dennis C. Parker	03283-PA	7291

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EXAMINER

SANDERS, KRIELLION ANTIONETTE

ART UNIT PAPER NUMBER

1714

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/696,197	Applicant(s) PARKER ET AL.	
	Examiner Kriellion A. Sanders	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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This action serves to correct typographical errors in the original action mailed 1/23/2006.

Applicant's period for response is restarted from the mailing date of this communication.

Election/Restrictions

1. Claims 1 and 2 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 7/14/2005.

2. This application contains claims 1 and 2 drawn to an invention nonelected with traverse.

At such time when a final rejection is mailed, a complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP

§ 821.01.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 12 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nelson, US Patent No.3196108.

5. Nelson discloses a method for preventing the advance of fire and creating a fire barrier comprising applying to the surface to be protected, an aqueous slurry of attapulgite clay. See col. 2, line 46 through col. 3, line 17 and col. 3, line 69 through col. 4, line 60.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson, US Patent No. 3196108, (as applied to claim 12 above), in view of Crouch et al, US Patent No. 6395200 and further in view of Ellis, US Patent No. 5130184 and Stayner, US Patent No. 4216136.

Nelson discloses a method for preventing the advance of fire and creating a fire barrier comprising applying to the surface to be protected, an aqueous slurry of attapulgite clay, including a fire suppressing chemical such as a salt of an inorganic acid or ammonium sulfates or ammonium phosphates. See col. 2, line 46 through col. 3, line 17 and col. 3, line 69 through col. 4, line 60.

Crouch et al discloses a liquid fire retardant composition for aerial application to ground vegetation. The composition comprises fire retardant components, a colorant and an aqueous carrier. The composition consists of a fugitive component, a non-fugitive component and a fire retardant salt, such as **ammonium polyphosphate**. The "fugitive component" is a dye.

The non-fugitive component may, for example, various clays and other insoluble materials, e.g., **attapulgite clay**. See col. 5, lines 9- 52 and col. 7, line 50 through col. 8, line 49, Tables A and B.

Ellis discloses non-combustible thin coatings, is used to form a coherent fire-barrier on or between susceptible wood or plastic substrates, or other substances. Consisting of a slurry of

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magnesium "oxychloride" cement, high alumina mono-calcium aluminate cement and a colloidal silica dispersed in dimethyl formamide (DMF). The coating retains its structural integrity through prolonged exposure to flame temperatures of 2000 degree. F. This solution, in the proportion disclosed in the formulas listed in TABLE I, is the "activator" or gauging solution, used to wet out and hydrate the MgO and the calcium aluminate cement, and is the principal liquid vehicle for the aqueous-based fire-barrier paint. Ellis indicates that a gauging solution used in the compositions of the invention may be MgSO_4 at a specific gravity of 1.25, or 29 degree Baume. These are better known as the common **Epsom salts**, ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$, a flaked, colorless crystalline material). Ellis therefore documents that Epsom salts are a specific type of magnesium sulfate. See the abstract, col. 7, line 55 through col. 9, line 2 and col. 17, lines 15-34.

Stayner also documents that **Epsom salts** are well recognized for producing flame retardant coatings. See col. 3, line 18 through col. 4, line 45.

Since magnesium sulfates or Epsom salts are well recognized in the art for providing flame retardant properties to coating compositions, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to employ Epsom salt of either of Ellis or Stayner et al as that flame retarding inorganic salt suggested by Nelson, absent a clear showing of unexpected results attributable to the inorganic salt employed.

Claims 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speronello et al. US Patent No. 6432322 in view of Hallo et al US Patent No, 6482473 and Drew et al US Patent No. 5,204,154.

The rejection is repeated for reasons of record.

Response to Arguments

8. Applicant's arguments filed 10/27/2005 have been fully considered but they are not persuasive.

In response to applicant's arguments, please note that applicant's claim 3 states specifically:

A composition useful for providing a fire protective coating on surfaces by immobilizing water therein and producing evaporative cooling comprising about 5-15% Attapulgite clay, about 1-10% magnesium sulfate with water to make 100%.

Speronello et al. US Patent No. 6432322 provides for a composition that may contain all of attapulgite clay, magnesium sulfate and water. The preferred composition also comprises a low solubility salt such as calcium sulfate and may additionally include a clay such as laponite clay. The preamble of claim 3 of the presently claimed invention, is a statement of intended use. The compositions as claimed must be useful for the purpose of providing a fire protective coating on a surface, however this statement of intended use does not preclude the use of the claimed compositions in alternative manners. Therefore, the reliance upon a reference, which teaches the components of the presently claimed composition in a utility that differs from the utility set forth in applicant's claims, is not prohibited. As was stated in the rejection, Speronello et al does not indicate that the invention is suitable for application wherein flame or fire protection is desired, however the compositions are useful for providing a fire protective coating on surfaces by virtue of the components therein. These components, Attapulgite clay, magnesium sulfate and water are recognized in the art for providing fire resistance to surfaces, as is documented by Hallo et al., discussed below.

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Hallo et al, US Patent No, 6482473, discloses a process for protecting surfaces from the direct application of concentrated heat. Said process comprises the steps of forming a colloidal suspension gel consisting essentially of a magnesium silicate hectorite clay and at least about 85% water by weight. The process employs magnesium silicate in the composition in the range of from about 5% to about 7% by weight, water in the range of 88% to 94.5% and a surfactant in the range of 0.5% to 5%. Also mentioned, is laponite, an especially preferred clay for purposes of the invention. The Laponite clay of Hallo et al is equated with the attapulgite clay of Speronello et al. See col. 2, line 38 through col. 3, line 46.

Speronello et al discloses the specific components of applicant's invention. Speronello et al does not disclose the same weight ratios of these components nor indicate that the combination of these components could have an intended use for providing a fire protective coating. However, since a component and its functions may not be separated, the compositions of Speronello et al would inherently possess fire protective properties when used at certain weight ratios.

Looking to Hallo et al for a description of the appropriate ratios of components to formulate a fire protecting composition, the ordinary practitioner would have found it obvious to employ 15% of magnesium compound combined with a clay compound and 85% of water, in the manner described by Hallo et al, to achieve optimal fire protecting properties.

Drew et al, US Patent No. 5,204,154 discloses a composition comprising attapulgite clay and mixtures thereof, in an amount of from about 2 weight percent to about 30 weight percent based on the total composition weight, and a flame retardant selected from the group consisting of bicarbonate of soda, epsom salt and mixtures thereof, in an amount of from about 5 weight

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percent to about 30 weight percent based on the total composition weight. See claim 28. Drew et al. would provide further suggestion as to appropriate weight ratios of clay and Epson salt to use to obtain satisfactory flame retarding properties.

Because the references outlined above have provided incentive for formulating the claimed compositions and indicate that the components therein possess flame protective properties, a method for preventing the advance of a fire utilizing the components of Speronello et al in the weight ratios suggested by Hallo et al and Drew et al would have also been obvious to one of ordinary skill in the art at the time of applicant's invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kriellion A. Sanders
Primary Examiner
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